Permit Application Review Summary

Application No.:	Initial Covered Source Permit Application No. 0838-01
Permit No.:	Covered Source Permit (CSP) No. 0838-01-C
Applicant:	Mid Pac Petroleum, LLC
Facility:	Par Hawaii Campbell Terminal 91-383 Kauhi Street Kapolei, Oahu
Mailing Address:	Par Hawaii, Inc. 1132 Bishop Street, Suite 2500 Honolulu, Hawaii 96813
Responsible Official:	Mr. Jim R. Yates President Par Hawaii, Inc. (808) 535-5937
Point of Contact:	Mr. Ted Metrose Environmental Director Par Hawaii Refining (808) 547-3930
Application Dates:	May 2, 2016 Additional information dated July 22, 2016

Proposed Project:

SICC 5171 (Petroleum Bulk Stations and Terminals) – Campbell Terminal (support facility)
SICC 2911 (Petroleum Refining) – Kapolei Refinery (primary facility)

Par Hawaii, Inc., through its subsidiary Mid Pac Petroleum, LLC, is applying for an initial covered source permit to construct and operate a new petroleum bulk loading terminal (Par Hawaii Campbell Terminal) north of and adjacent to the Par Hawaii Refining, LLC, Kapolei Refinery. The project includes the construction of eleven (11) petroleum storage tanks, a petroleum and renewable fuels tank truck load rack, a vapor collection system for volatile organic compound (VOC) emissions, and a vapor control device (vapor combustion unit).

The proposed site for this new construction project is zoned for industrial use and sits on land owned by Par Hawaii Refining, LLC. The proposed Campbell Terminal will receive gasoline, denatured ethanol, diesel, and jet fuel via pipeline, and store these products in aboveground petroleum storage tanks. All products will be bottom loaded into tank trucks at a 3-bay/30-arm petroleum tank truck load rack. Additionally, ethanol will be transferred via pipeline to Barbers Point Harbor for delivery by barge or vessel to outer island terminals. Transmix generated from the pipeline mixture of interface between the two products will be stored in a designated tank, and subsequently transferred by truck back to the refinery for processing. Permit flexibility is requested to allow for future storage of jet fuel and biodiesel. In addition to the eleven (11) petroleum storage tanks, terminal operations will require the use of three (3) smaller fuel performance additive tanks, one (1) petroleum contact water (PCW) tank, and one (1) oil-water separator tank. The tank truck load rack will be equipped with a vapor collection system and vapor combustion unit (VCU) to control VOC emissions. A series of pumps will support all product transfers associated with terminal operations.

This project is being pursued because Par Hawaii, Inc. does not currently own or operate a bulk gasoline load rack on Oahu. Par Hawaii, Inc., wishes to improve logistical efficiency by moving its product distribution outside of the congested Honolulu area. The proposed Campbell Terminal would also allow Par Hawaii, Inc., to utilize modern technology for loading and VOC controls, exercise more independent control in meeting EPA and state renewable fuel standards, relieve congestion in Honolulu, and compete better in the marketplace. Although this project will result in new VOC emissions, much of it will be offset by product volumes (and VOC emissions) that will be reduced at their current terminal partnering facilities (Aloha Petroleum).

The initial application fee for a major, toxic covered source of $5000.00 was submitted and processed since this project can be considered part of the Par Hawaii Refining, LLC, Kapolei Refinery, which is a major toxic source. This project meets all three (3) criteria factors that define a major source: (1) Under common control; (2) Located on contiguous or adjacent properties; and (3) Belonging to the same industrial grouping based on the same first two-digit Standard Industrial Classification (SIC) code, or having one of the facilities serve as a support facility to the other.

The proposed Campbell Terminal and Kapolei Refinery are under the common control of Par Pacific Holdings, Inc. The Campbell Terminal will be owned by Mid Pac Petroleum, LLC, which is a subsidiary of Par Hawaii, Inc., which is a corporate holding of Par Pacific Holdings, Inc. The Kapolei Refinery is owned by Par Hawaii Refining, LLC, which is a subsidiary of Par Pacific Holdings, Inc. The Campbell Terminal will be constructed on land located contiguous and adjacent to the Kapolei Refinery. The Campbell Terminal qualifies as a support facility to the Kapolei Refinery because more than fifty percent (50%) of its services will be dedicated to the Kapolei Refinery. Alternatively, the Campbell Terminal can also be considered as a part of the Kapolei Refinery, which has a SIC code of 2911. Either method can be used to determine this project to be a major source.

Equipment Description:

Petroleum Storage Tanks

Tank No.	Type of Tank	Storage Capacity (barrels)	Product Stored	Product Stored (Alternate)	NSPS Subpart Kb?	Group 1 or Group 2 Tank
1	Internal Floating Roof	10,000	Gasoline	Jet Fuel & Biodiesel	yes	Group 1
2	Internal Floating Roof	10,000	Ethanol	Jet Fuel	yes	Group 2
3	Internal Floating Roof	2,000	Transmix	Jet Fuel & Biodiesel	yes	Group 1
4	Internal Floating Roof	10,000	Ethanol	Jet Fuel	yes	Group 2
5	Internal Floating Roof	80,000	Ethanol		yes	Group 2
6	Fixed Roof	40,000	Diesel		no	Group 2
7	Internal Floating Roof	40,000	Gasoline		yes	Group 1
8	Internal Floating Roof	40,000	Gasoline		yes	Group 1
9	Internal Floating Roof	40,000	Gasoline		yes	Group 1
10	Internal Floating Roof	20,000	Gasoline	Jet Fuel	yes	Group 1
11	Internal Floating Roof	20,000	Gasoline	Jet Fuel	yes	Group 1

Petroleum Tank Truck Load Rack

Equipment	Product
Petroleum Tank Truck Load Rack, bottom loading, three (3) truck bays, eighteen (18) gasoline arms, six (6) diesel arms, two (2) jet fuel arms, four (4) ethanol arms	Gasoline, Ethanol, Diesel, Biodiesel, Jet Fuel, Transmix, IVD Additive, Lubricity Additive, Red Dye, Anti-Static Additive
One (1) 54.2 MMBtu/hr John Zink enclosed flame vapor combustion unit, model no. ZCT-3-8-45-X-2/8-2/8-XX with a forty-five (45) foot exhaust stack height. No steam assist. Uses propane for pilot gas.	Gasoline, Transmix, propane (pilot)

Maximum Allowable Throughputs

Product	Petroleum Tank Truck Load Rack
Gasoline	4,400,000 bbl/yr
Ethanol	484,000 bbl/yr
Diesel and Biodiesel	3,840,000 bbl/yr
Jet Fuel	1,476,000 bbl/yr
Transmix	24,000 bbl/yr
IVD Additive	3,800 bbl/yr
Lubricity Additive	640 bbl/yr
Red Dye	48 bbl/yr
Anti-Static Additive	4 bbl/yr

Air Pollution Controls:

VOC emissions are controlled using the following air pollution controls:

1. Petroleum storage tanks nos. 1, 2, 3, 4, 5, 7, 8, 9, 10, and 11 will be equipped with NSPS Subpart Kb internal floating roofs and seals.
2. The petroleum tank truck load rack is bottom loading and will have a VCU to control VOC emissions.

Applicable Requirements:

Hawaii Administrative Rules (HAR)
Title 11, Chapter 11-59, Ambient Air Quality Standards
Title 11, Chapter 11-60.1, Air Pollution Control
- Subchapter 1, General Requirements
- Subchapter 2, General Prohibitions
  - 11-60.1-31 Applicability
  - 11-60.1-39 Storage of Volatile Organic Compounds
- Subchapter 5, Covered Sources
- Subchapter 6, Fees for Covered Sources, Noncovered Sources, and Agricultural Burning
  - 11-60.1-111 Definitions
  - 11-60.1-112 General Fee Provisions for Covered Sources
  - 11-60.1-113 Application Fees for Covered Sources
  - 11-60.1-114 Annual Fees for Covered Sources
  - 11-60.1-115 Basis of Annual Fees for Covered Sources
- Subchapter 8, Standards of Performance for Stationary Sources
- Subchapter 9, Hazardous Air Pollutant Sources
  - 11-60.1-174 Maximum Achievable Control Technology (MACT) Emission Standards
  - 11-60.1-180 National Emission Standards for Hazardous Air Pollutants

Federal Requirements

40 Code of Federal Regulations (CFR) Part 60 – Standards of Performance for New Stationary Sources

40 CFR Part 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984

40 CFR Part 60, Subpart XX - Standards of Performance for Bulk Gasoline Terminals

40 CFR Part 60, Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007

Applicable to the loading vapors since it qualifies as a fuel gas since the fuel gas definition means any gas generated at a petroleum refinery and which is combusted. The definition does include vapors collected and combusted in a thermal oxidizer installed to control emissions from a gasoline loading rack at a petroleum refinery.

40 CFR Part 60, Subpart GGGa – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Applicable to all compressors, valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and flanges or other connectors *in VOC service* as defined in §60.481a of 40 CFR Part 60, Subpart VVa, and for which construction, modification, or reconstruction is commenced after November 7, 2006, at the Campbell Terminal.

40 CFR Part 60, Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems

Applicable to all individual drain systems, oil-water separator, and aggregate facility, as defined in §60.691 of 40 CFR Part 60, Subpart QQQ, and for which construction, modification, or reconstruction is commenced after May 4, 1987, at the Campbell Terminal.

40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Applicable to the 1490 bhp emergency stationary diesel engine generator

40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPS)

40 CFR Part 61, Subpart FF – National Emission Standard for Benzene Waste Operations

Applicable to all Group 1 wastewater streams, as defined in §63.641 of 40 CFR Part 63, Subpart CC, at the Campbell Terminal

40 CFR Part 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories

40 CFR Part 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries

Petroleum Storage Tanks Nos. 1, 3, 7, 8, 9, 10, and 11 are classified as Group 1 storage tanks and shall comply with 40 CFR Part 60, Subpart Kb, except as provided in 40 CFR §63.640(n)(8). Petroleum Storage Tanks Nos. 2, 4, and 5 are classified as Group 2 storage tanks and shall comply with 40 CFR Part 60, Subpart Kb, except as provided in 40 CFR §63.640(n)(8). Petroleum Storage Tank No. 6 is classified as a

Group 2 storage tank.
A Group 1 gasoline loading rack that is part of a source subject to Subpart CC and is also subject to the provisions of 40 CFR Part 60, Subpart XX is required to comply only with Subpart CC. A Group 1 gasoline loading rack subject to provisions of Subpart CC shall comply with 40 CFR Part 63, Subpart R, §§63.421, 63.422(a) through (c) and (e), 63.425(a) through (c) and (e) through (i), 63.427(a) and (b), and 63.428(b), (c), (g)(1), (h)(1) through (3), and (k).

Applicable to all pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, or instrumentation systems *in organic hazardous air pollutant service*, as defined in §63.641 of 40 CFR Part 63, Subpart CC, at the Campbell Terminal. Per §63.640(p)(2) – Equipment leaks that are also subject to the provisions of 40 CFR Part 60, Subpart GGGa, are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa.
Per 40 CFR §63.640(i)(3), the Campbell Terminal is not considered to be a new source, but will be considered to be an existing source, since the potential to emit is less than 10 tpy of any individual HAP and 25 tpy of any combination of HAPs.

40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
Applicable to the 1490 bhp emergency stationary diesel engine generator

Non-Applicable Requirements:

Hawaii Administrative Rules (HAR)
Title 11, Chapter 11-60.1, Air Pollution Control
Subchapter 7, Prevention of Significant Deterioration Review

Federal Requirements
40 CFR Part 52.21 - Prevention of Significant Deterioration of Air Quality

Best Available Control Technology (BACT):

A BACT analysis is applicable only to new covered sources and significant modifications to covered sources that have the potential to emit or increase emissions above significant amounts as defined in HAR §11-60.1-1. The project emissions for the Campbell Terminal are below the significant levels. Therefore, a BACT analysis is not applicable.

Pollutant	Potential Emissions (tpy)	Significant Level (tpy)	Significant?
NO_x	4.1	40	No
SO_2	0	40	No
CO	8.7	100	No
PM	0.3	25	No
PM_{10}	0.3	15	No
VOC	39.3	40	No

Prevention of Significant Deterioration (PSD):

PSD is not applicable because this facility is not a *new* major stationary source nor does this application propose any *major modifications* to a major stationary source as defined in 40 CFR §52.21. A PSD major modification is defined as a project at an existing major stationary source that will result in a significant emissions increase and a significant net emissions increase of any regulated NSR pollutant as defined in 40 CFR §52.21. Since there are no significant emission increases for this project, PSD is not triggered.

Air Emissions Reporting Requirements (AERR):

40 CFR Part 51, Subpart A – Air Emissions Reporting Requirements, is based on the emissions of criteria air pollutants from Type A and B point sources (as defined in 40 CFR Part 51, Subpart A), that emit at the AERR triggering levels as shown in the table below:

Pollutant	**Type A Triggering Levels [1,2] (tpy)**	**Type B Triggering Levels [1] (tpy)**	**Pollutant**	**In-house Total Facility Triggering Levels [1] (tpy)**
NO_x	≥2500	≥100	NO_x	≥25
SO_2	≥2500	≥100	SO_2	≥25
CO	≥2500	≥1000	CO	≥250
$PM_{10}/PM_{2.5}$	≥250/250	≥100/100	PM/PM_{10}	≥25/25
VOC	≥250	≥100	VOC	≥25
Pb		≥0.5 (actual)	Pb	≥5
			HAPS	≥5

[1]Based on potential emissions
[2]Type A sources are a subset of Type B sources and are the larger emitting sources by pollutant

The Par Hawaii Refining Kapolei Refinery (in which the Campbell Terminal will be located contiguous and adjacent to) exceeds the Type A triggering levels. Therefore, AERR requirements are applicable.

The Clean Air Branch also requests annual emissions reporting from those facilities that have facility-wide emissions of a single air pollutant exceeding in-house triggering levels or is a covered source. Annual emissions reporting for the facility will be required for in-house recordkeeping purposes since this is a covered source.

Compliance Assurance Monitoring (CAM):

The purpose of Compliance Assurance Monitoring (CAM) is to provide a reasonable assurance that compliance is being achieved with large emissions units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 CFR Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential pre-control emissions that are 100% of the major source level; and (5) not otherwise be exempt from CAM. CAM is not applicable for the VCU serving the petroleum tank truck load rack since it is exempt from CAM (40 CFR Part 63, Subpart CC is a post-1990 standard).

Synthetic Minor:

A synthetic minor is a facility that without operational limitations, emits above the major source triggering levels as defined by HAR §11-60.1-1, but is made non-major by using operational limitations. This facility is a major source and not a synthetic minor since emissions from the Par Hawaii Refining, LLC Kapolei Refinery are included in the total emissions.

Project Emissions:

Source	VOC Emissions (tpy)
Tank 1	1.2
Tank 2	0.1
Tank 3	0.8
Tank 4	0.1
Tank 5	0.3
Tank 6	1.6
Tank 7	2.1
Tank 8	2.1
Tank 9	2.1
Tank 10	1.5
Tank 11	1.5
Tank 20 (insignificant activity)	0.1
Tank 21 (insignificant activity)	0.2
Tank 22 (insignificant activity)	0.03
PCW Tank	0.012
Oil-Water Separator Tank	0.012
Tote Tank 1	0.0006
Tote Tank 2	0.0027
Tank Truck Load Rack (fugitives, not captured by VCU) [1,2,3,4,5,6,12]	15.2
VCU [7,8,9,10,11,12]	8.6
Fugitive Components	1.7
Diesel Engine Generator (insignificant activity)	0.1
Total Emissions	39.3

VCU Criteria Pollutants Emissions

Pollutants	tpy
CO	8.63
NO_x	3.48
SO_2	negligible
PM_{10}	0.32
$PM_{2.5}$	0.32

DEG Criteria Pollutants Emissions

Pollutants	tpy
CO	0.1
NO_x	0.6
SO_2	0.00014
PM_{10}	0.013
$PM_{2.5}$	0.013

HAP Emissions

Pollutants	tpy
Benzene	0.16
Ethylbenzene	0.06
n-Hexane	0.85
Toluene	0.47
Xylenes (Mixed Isomers)	0.12
Naphthalene	0.04
Cumene	0.01
Total HAP Emissions	1.71

Notes:

1 *Based on a throughput limit of 4,400,000 barrels of gasoline, 484*,000 barrels of ethanol, 3,840,000 barrels of diesel, 1,476,000 barrels of jet fuel, 24,000 barrels of transmix, 3,800 barrels of IVD gasoline additive, 640 barrels of lubricity additive, 48 barrels of red dye additive, and 4 barrels of anti-static additive per any rolling twelve-month (12-month) period.

2 Maximum throughputs are limiting and represent the subtotal of tank throughputs by material listed in Table S2-1 on Form S-2.

3 Maximum throughput for gasoline includes the sum of throughputs from Tanks 1, 7, 8, 9, 10, and 11; ethanol from Tanks 2 and 4.

4 Maximum throughput for jet fuel includes the sum of throughputs from Tanks 1, 2, 3, 4, 10, and 11 (alternate product services).

5 Loading of diesel, jet fuel, and their respective fuel additives is not subject to vapor collection and control, i.e., collection efficiency = 0 %.

6 Loading of IVD gasoline additive into totes for delivery to outer islands will occur in loading stations, but is not subject to vapor collection and control.

7 Only gasoline, ethanol, transmix, and IVD gasoline additive loading operations will be controlled by the VCU.

8 Emission rates based on the VCU manufacturer's (John Zink) guaranteed emission rates: VOC – 10 mg/L loaded, NO_x – 4 mg/L loaded, CO – 10 mg/L loaded

9 $PM_{10}/PM_{2.5}$ emission factor from AP-42, Table 1.4-2. Emission factor converted to lb/MMBtu based on 1020 Btu/scf.

10 VCU is expected to operate 24 hours/day maximum.

11 VCU emissions includes propane pilot and assist gas combustion.

12 VCU has a collection efficiency of 99.2%.

Greenhouse Gas (GHG) Emissions:

The Campbell Terminal is not subject to PSD for GHG emissions because it does not emit GHG emissions greater than 100,000 tpy CO_2e. See table below.

Fuel	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	CO_2e (tpy)
VCU Pilot Gas (Propane)	31	0	0	31
VCU Load Rack Vapors (Finished Gasoline)	6,383	0.3	0.1	6,406
Diesel Engine Generator	86	0	0	86
Total Emissions (Short Tons)	6,449	0.3	0.1	6,522

Alternate Operating Scenarios:

The applicant did not propose any alternate operating scenarios.

Insignificant Activities:

Insignificant per HAR §11-60.1-82(f)(1) and §11-60.1-82(f)(7):

1. One (1) 10,000 gallon fixed roof tank no. 20 storing IVD additive;
2. One (1) 10,000 gallon fixed roof tank no. 21 storing IVD additive;
3. One (1) 10,000 gallon fixed roof tank no. 22 storing lubricity additive;
4. One (1) 10,000 gallon fixed roof petroleum contact water (PCW) tank;
5. One (1) 10,000 gallon fixed roof oil-water separator tank;
6. One (1) 350 gallon tote tank no. 1 – red dye fuel additive; and
7. One (1) 350 gallon tote tank no. 2 – anti-static fuel additive.

Insignificant per HAR §11-60.1-82(f)(5):

1. One (1) emergency diesel engine generator, 1490 bhp, Tier 2 or greater.

Ambient Air Quality Assessment:

The applicant conducted an ambient air quality impact analysis (AAQIA) to determine the emissions impact on the ambient air quality from the proposed vapor combustion unit (VCU).

The analysis used the EPA's AERSCREEN model to quantify ambient air pollutant impacts in the surrounding area. Using a screening modeling analysis such as AERSCREEN will give more conservative results than using a refined modeling analysis such as AERMOD.

Hourly emission averages were calculated based the maximum instantaneous loading rate at the petroleum tank truck load rack (7,200 gpm of gasoline).

The parameters used in the AERSCREEN model consisted of the following:

- Flat terrain option (terrain height below stack base elevation)
- Rural dispersion - Downwash effects from Tank No. 8
- Meteorology parameters consisting of the following:
  Min/Max temperature = 50 °F/91 °F
  Minimum wind speed = 0.5 m/s
  Anemometer height = ten (10) meters
  Surface characteristics input = AERMET seasonal tables
  Dominant surface profile = urban
  Dominant climate type = average moisture

Stack Parameters

Equipment	Stack Parameters						
	Height (ft)	**Temp. (°F)**	**Velocity (ft/s)**	**Diameter (ft)**	**NO_x to NO_2 chemistry**	**NO_2/NO_x in-stack ratio**	**O_3 Background Concentration (ppm)**
VCU	45	1400	62.2	8	PVMRM	0.5	0.057

VCU Downwash Parameters	
Building Height	48 ft
Building Width	77 ft
Building Length	77 ft
Stack Distance from Center Point	168 ft

Parameter	**VCU**
Dominant Season (maximum concentration)	Winter
Albedo	0.35
Bowen Ratio	1.5
Roughness Length	1 meter

Maximum Modeled Impacts for the VCU

Pollutant	**Averaging Period**	**VCU Emission Rate (lb/hr)**	**VCU Maximum Modeled Concentration [a] ($\mu g/m^3$)**
NO_2	Annual	14.43	7.79
	1-hr	14.43	38.96
CO	8-hr	36.08	97.42
	1-hr	36.08	108.24
PM_{10}	Annual	1.29	0.77
	24-hr	1.29	2.32
$PM_{2.5}$	Annual	1.29	0.77
	24-hr	1.29	2.32

[a] The State of Hawaii default scaling factor of 0.2 was used for the annual concentrations
Emission rates based on the VCU manufacturer's guaranteed emission rates:
NO_x – 4 mg/L loaded, CO – 10 mg/L loaded
$PM_{10}/PM_{2.5}$ emission factors from AP-42, Table 1.4-2, Emission factor converted to lb/MMBtu based on 1020 Btu/scf
SO_2 emission rates are negligible from VCU

The predicted ambient air quality impacts are shown in the table below. The table demonstrates that the impacts of NO_2, SO_2, CO, PM_{10}, and $PM_{2.5}$ from the VCU plus background air quality levels should not cause or contribute to a violation of any State or National ambient air quality standard.

Predicted Ambient Air Quality Impacts for VCU

Pollutant	Averaging Period	VCU Maximum Modeled Concentration ($\mu g/m^3$)	Measured Background Concentration [a] ($\mu g/m^3$)	Maximum Total Concentration ($\mu g/m^3$)	AAQS [b] ($\mu g/m^3$)	Percent of AAQS (%)
NO_2	Annual	7.79	8	15.79	75	21
	1-hr	38.96	81	119.96	188	64
CO	8-hr	97.42	1489	1586.42	5000	32
	1-hr	108.24	3093	3201.24	10000	32
PM_{10}	Annual	0.77	15	15.77	50	32
	24-hr	2.32	38	40.32	150	27
$PM_{2.5}$	Annual	0.77	4	4.77	12	40
	24-hr	2.32	10	12.32	35	35

[a] Background concentrations are based on the Kapolei Monitoring Station for all pollutants. The data from 2013 was used. The 1st high maximums were used for all pollutants, except for $PM_{2.5}$ which used the 98th percentile.

[b] Only the more restrictive of the National Ambient Air Quality Standards or State Ambient Air Quality Standards are shown.

The new petroleum storage tanks and new petroleum tank truck load rack also emit fugitive VOCs and any HAPs associated with these VOCs. An ambient air quality impact assessment is not required for the following reasons: (1) VOCs do not have an ambient air quality standard, and (2) the Department of Health air modeling guidance generally exempts an applicant from performing an ambient air quality impact assessment for fugitive sources (storage tanks, pipe leaks, etc.).

Significant Permit Conditions:

Significant permit conditions include the following:

1. Petroleum Storage Tanks Nos. 1, 2, 3, 4, 5, 7, 8, 9, 10, and 11 are subject to the provisions of the following federal regulations:

    a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
    b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

2. Petroleum Storage Tanks Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11 are subject to the provisions of the following federal regulations:

    a. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A, General Provisions;
    b. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart CC, National Emission Standards for Hazardous Air Pollutants

from Petroleum Refineries;

c. Petroleum Storage Tanks Nos. 1, 3, 7, 8, 9, 10, and 11 are classified as Group 1 storage tanks and shall comply with 40 CFR Part 60, Subpart Kb, except as provided in 40 CFR §63.640(n)(8). Petroleum Storage Tanks Nos. 2, 4, and 5 are classified as Group 2 storage tanks and shall comply with 40 CFR Part 60, Subpart Kb, except as provided in 40 CFR §63.640(n)(8). Petroleum Storage Tank No. 6 is classified as a Group 2 storage tank.

3. The petroleum tank truck load rack and associated appurtenances are subject to the provisions of the following federal regulations:

   a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
   b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart XX, Standards of Performance for Bulk Gasoline Terminals;
   c. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart Ja, Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007;
   d. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A, General Provisions;
   e. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.

4. All compressors, valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and flanges or other connectors *in VOC service* as defined in §60.481a of 40 CFR Part 60, Subpart VVa, and for which construction, modification, or reconstruction is commenced after November 7, 2006, at the Campbell Terminal, are subject to the provisions of the following federal regulations:

   a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
   b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart GGGa, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006.

5. All individual drain systems, oil-water separator, and aggregate facility, as defined in §60.691 of 40 CFR Part 60, Subpart QQQ, and for which construction, modification, or reconstruction is commenced after May 4, 1987, at the Campbell Terminal, are subject to the provisions of the following federal regulations:

   a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
   b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart QQQ, Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems.

6. All Group 1 wastewater streams, as defined in §63.641 of 40 CFR Part 63, Subpart CC, at the Campbell Terminal, are subject to the provisions of the following federal regulations:

a. 40 CFR Part 61, National Emission Standard for Hazardous Air Pollutants, Subpart A, General Provisions;
b. 40 CFR Part 61, National Emission Standard for Hazardous Air Pollutants, Subpart FF, National Emission Standard for Benzene Waste Operations.

7. All pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, or instrumentation systems *in organic hazardous air pollutant service*, as defined in §63.641 of 40 CFR Part 63, Subpart CC, at the Campbell Terminal, are subject to the provisions of the following federal regulations:

   a. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A, General Provisions;
   b. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.

8. Petroleum Tank Truck Load Rack

   a. The maximum throughput of the petroleum tank truck load rack shall not exceed 4,400,000 barrels of gasoline per rolling twelve-month (12-month) period.
   b. The maximum throughput of the petroleum tank truck load rack shall not exceed 484,000 barrels of ethanol per rolling twelve-month (12-month) period.
   c. The maximum throughput of the petroleum tank truck load rack shall not exceed 3,840,000 barrels of diesel and biodiesel combined per rolling twelve-month (12-month) period.
   d. The maximum throughput of the petroleum tank truck load rack shall not exceed 1,476,000 barrels of jet fuel per rolling twelve-month (12-month) period.
   e. The maximum throughput of the petroleum tank truck load rack shall not exceed 24,000 barrels of transmix per rolling twelve-month (12-month) period.

   Note: Gasoline, diesel, and jet fuel throughputs do not include additives.

9. The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks shall not exceed ten (10) milligrams of total organic compounds per liter of gasoline loaded.

10. Fenceline Monitoring for Benzene

    a. The permittee shall conduct sampling along the facility property boundary and analyze the samples in accordance with 40 CFR Part 63, Appendix A, Methods 325A and 325B and 40 CFR §63.658(b) through (k).
    b. The target analyte is benzene.
    c. The permittee shall determine passive monitor locations in accordance with 40 CFR Part 63, Appendix A, Method 325A, Section 8.2.
    d. The permittee shall collect and record meteorological data according to the applicable requirements in 40 CFR §63.658(d)(1) through (3).
    e. The permittee shall use a sampling period and sampling frequency as specified in 40 CFR §63.658(e)(1) through (3).
    f. Within forty-five (45) days of completion of each sampling period, the permittee shall determine whether the results are above or below the action level using the

procedures in 40 CFR §63.658(f)(1) through (3).

g. Within five (5) days of determining that the action level has been exceeded for any annual average Δc and no longer than fifty (50) days after completion of the sampling period, the permittee shall initiate a root cause analysis to determine the cause of such exceedance and to determine appropriate corrective action. The root cause analysis and initial corrective action analysis shall be completed and initial corrective actions taken no later than forty-five (45) days after determining there is an exceedance. Root cause analysis and corrective action may include, but is not limited to:

    i. Leak inspection using 40 CFR Part 60, Appendix A-7, Method 21, and repairing any leaks found.
    ii. Leak inspection using optical gas imaging and repairing any leaks found.
    iii. Visual inspection to determine the cause of the high benzene emissions and implementing repairs to reduce the level of emissions.
    iv. Employing progressively more frequent sampling, analysis and meteorology (e.g. using shorter sampling periods for 40 CFR Part 63, Appendix A, Methods 325A and 325B, or using active sampling techniques).

h. If, upon completion of the corrective action analysis and corrective actions such as those described in Attachment IIC, Special Condition No. D.3.g, the Δc value for the next fourteen-day (14-day) sampling period for which the sampling start time begins after the completion of the corrective actions is greater than 9 $\mu g/m^3$ or if all corrective action measures identified require more than forty-five (45) days to implement, the permittee shall develop a corrective action plan that describes the corrective action(s) completed to date, additional measures that the permittee proposes to employ to reduce fenceline concentrations below the action level, and a schedule for completion of these measures. The permittee shall submit the corrective action plan to the Department within sixty (60) days after receiving the analytical results indicating that the Δc value for the fourteen-day (14-day) sampling period following completion of the initial corrective action is greater than 9 $\mu g/m^3$ or, if no initial corrective actions were identified, no later than sixty (60) days following the completion of the corrective action analysis required in Attachment IIC, Special Condition No. D.3.g.

i. The permittee may request approval from the Department for a site-specific monitoring plan to account for offsite upwind sources or onsite sources excluded under 40 CFR §63.640(g) according to the requirements in 40 CFR §63.658(i)(1) through (4).

j. The permittee shall comply with the recordkeeping requirements in 40 CFR §63.655(i)(8)(i) through (x) on an ongoing basis.

k. As outlined in 40 CFR §63.7(f), the permittee may submit a request for an alternative test method. At a minimum, the request must follow the requirements outlined in 40 CFR §63.658(k)(1) through (7).

l. The permittee must achieve compliance on or before January 30, 2018.

Conclusion/Recommendation:

Recommend issuing an initial Covered Source Permit (CSP) No. 0838-01-C, subject to the significant permit conditions described above, a thirty-day (30-day) public comment period, and a forty-five-day (45-day) EPA review period.

Reviewer: Darin Lum
Date: 9/2016